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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/600,565	06/23/2003	Silvio Shiguetoshi Satto	08200.795	9616

7590 09/29/2004

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EXAMINER

COTTINGHAM, JOHN R

ART UNIT	PAPER NUMBER
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3679

DATE MAILED: 09/29/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/600,565

Applicant(s)

SATTO, SILVIO SHIGUETOSHI

Examiner

John R. Cottingham

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_.

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-9 are rejected under 35 U.S.C. 102(b) as being anticipated by Herbenar U.S. Patent 3,790,195. Herbenar shows all of the claimed subject matter of a self-centering ball-and-socket joint in Figures 1-6.

Regarding claim 1, a self-centering ball-and-socket joint, comprising: (a) a spherical pin (26), with a first end rotably coupled to first (27) and second (45) bearings, (b) said first end comprised of first (30) and second (39) hemispheres, said first hemisphere (30) having a larger diameter than said second hemisphere (39), (c) said first (27) and second (45) bearings being mounted inside a case (12), said case (12) having a connection system, (d) said spherical pin (26), having a second end extending out of said case (12), said second end having a connection system.

Regarding claim 2, wherein said first end of said spherical pin (26) interacts with said bearing assembly (39, 30) to restrict motion in a first pre-determined direction, and to allow free rotary motion in a second pre-determined direction.

Regarding claim 3, wherein said first hemisphere (30) is coupled with said first bearing (27), said first bearing (27) having an arcuate shape, and said second hemisphere (39) being coupled with said second bearing (45).

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Regarding claim 4, wherein restricted angular movement of said second end of said shear pin (26) occurs as a result of the said second bearing (45) interaction with said second hemisphere (39), said second bearing (45,29) being comprised of an elastic material.

Regarding claim 8, wherein said first hemisphere (30), and said second hemisphere (39) form a single unitary part, created from a single piece of material. (Applicant is reminded that this is a product by process claim, and the process does not have to shown as long as the product is shown).

Regarding claim 9, a self-centering ball-and-socket joint used in connecting parts requiring restricted angular movement, said joint comprising: (a) a spherical pin (26) with a first end disposed within a bearing assembly (45, 27, 29) said bearing assembly (45, 27, 29) being disposed within an outer case (12); and (b) said bearing assembly (45, 27, 29) comprising first (27) and second (45, 29) bearings; and (c) said first (27 ) and said second (45, 29) bearings being comprised of elastomeric material (see cross hatching); (d) said first end of said spherical pin (26) further comprising first (30) and second (39) hemispheres, said first hemisphere (30) having a larger diameter than said second hemisphere (39), and (e) said first (30) and second (39) hemispheres disposed within said first (27) and second (45, 29) bearings; and said first hemisphere (30) directly contacting said first bearing (27), and said second hemisphere (39) directly contacting said second bearing (45, 29), and (g) said second (45, 29) bearings contacting a flat portion of said first hemisphere (30), and said second bearing contacting an arcuate portion of said second hemispheres (39) such that said spherical

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pin (26) is continuously urged to return to a pre-determined position; . (h) a sealing cover (bent lip over bearing 27) directly contacting said second bearing (02), said sealing cover sealing said outer case.

### ***Conclusion***

3. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Martin et al. U.S. Patent 5,649,779, Herbenar U.S. Patent 3,613,201, and Herbenar et al. U.S. Patent 3,430,995 show similar inventions.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John R. Cottingham whose telephone number is (703) 306-3439. The examiner can normally be reached on Monday - Thursday, alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Daniel P. Stodola can be reached on (703) 308-2686. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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A handwritten signature in black ink, appearing to read 'John R. Cottingham', is written over the printed name.

John R. Cottingham  
Primary Examiner  
Art Unit 3679

jrc